FACT SHEET – AMENDMENT #4

State Waste Discharge Permit 8032

National Frozen Foods

I. GENERAL INFORMATION

Facility: National Frozen Foods Corp.
P.O. Box A
Moses Lake, WA 98837

Facility Location: east of the city of Moses Lake; along Wheeler Road (Grant County)

Type of Facility: Vegetable processor

Wastewater Treatment: Screening, land application

II. BACKGROUND

National Frozen Foods processes freshly harvested peas, corn, lima beans, and carrots into frozen products that are shipped off-site in large tote containers for packaging. The processing season generally lasts from May through November, and the facility generally operates on a "24hr/7 day per week" schedule.

Process wastewater is collected in a floor channel/drain system and gravity flows to a wet well where it is pumped through a rotary screen, then is pumped approximately four miles via a 12" force main to flow equalization ponds and finally irrigated onto cropped fields. Both ponds are lined (60 mil HDPE) and have a total capacity of approximately two million gallons. The wastewater is mixed with supplemental water from a nearby irrigation supply canal and spray irrigated onto one of five center pivot circles; 375 total acres.

A state waste discharge permit was issued to the NFF facility on August 22, 2001. The permit was modified in February 2002 to limit the time when wastewater could be spray irrigated; May – November. A second modification was done in 2002 to temporarily add a 150 acre sprayfield to their wastewater sprayfield system. A third modification was done in 2003 to, in part, add two center pivot fields to the sprayfield system to bring the total acreage used for process wastewater treatment to the current 375 acres.

III. PERMIT MODIFICATION

National submitted an amended wastewater engineering report (Brown and Caldwell, 2004) and discharge permit application for the modification of their state waste discharge permit. These were submitted to add a 50 acre sprayfield to their wastewater sprayfield system.

IV. DISCUSSION

The new acreage is located adjacent to NFF's processing facility in the SW ¼ of Section 16, Township 19, Range 29 E.W.M.; Figure 1. Wastewater will be applied via wheel lines. This field is part of the original wastewater sprayfield system that was used by NFF prior to a major process facility expansion in 1997 and the concurrent addition of the 300 acres provided by CF-1, -2, and -3; Figure 1.

Information provided in the amended engineering report shows that all fields will be cropped in either alfalfa or timothy hay. Based on past performance and crop yields, the projected nitrogen loads to all fields are expected to be less than crop uptake. The estimated volume of process wastewater produced in 2004 (310 acre-feet) is less than the crop requirement (1568 acre-feet) and will require the balance to be provided by supplemental irrigation water.

The estimated salt load to the fields in 2004 is 1700 lbs/acre. This is higher than the crop uptake in 2003 (860 lbs/acre) and is somewhat typical for vegetable and potato processors in the region that use land treatment systems. This imbalance makes salt management of the fields very important with regards to controlling soil salinity, and the potential to leach high salt loads to the ground water.

Trend analysis of soil nitrogen, salt, and cation/anions have been used in lieu of ground water monitoring to help assess whether or not the operation of the sprayfields is being protective of the ground water. This information is presented in NFF's annual Irrigation and Crop Management Plan. The latest trend analysis information shows an elevation of soluble salts in the deeper soils (Brown and Caldwell, 2003). Values for the exchangeable sodium percentage (ESP) have shown an increasing trend to values greater than 15% in 2002. Values greater than 15% indicate sodic soil conditions which could result in lower crop productivity and reduced soil drainage.

<u>System Improvements</u>

The amended engineering report noted that a new filtration system will be installed for the 2004 season and piping changes will be made to correct minor leakage problems.

V. CONCLUSION

The addition of the 50 acre site will reduce loading rates to the sprayfield system, and add to the odor control measures already in place by reducing the frequency and duration of storing process wastewater in the irrigation equalization pond during harvest periods for the wastewater sprayfields.

The permit will be modified and the following changes will be made.

1. The cover page of the permit will be changed as follows:

   Discharge Location: Approximately ~~380~~ **425** acres in Sec. 34, T. 20N., R. 29 EWM, and the NE ¼ of Sec. 4, **and the SW ¼ of Sec. 16,** T. 19N, R. 29 EWM.

2. Section S1 of the permit will be changed as follows:

   The Permittee is authorized to apply wastewater for final treatment during the period of April through December on the following designated irrigation lands:

   Approximately ~~380~~ **425** acres located in Sec. 34, T.20N., R. 29 EWM**,** and the NE ¼ of Sec. 4, **and the SW ¼ of Sec. 16,** T. 19N, R. 29 EWM. (Grant County).

The public will be notified of the proposed changes to the permit via a legal notice in the local newspaper, and a 30-day comment period will follow.

VI. REFERENCES

Brown and Caldwell, 1999. National Frozen Foods, Moses Lake Facility, Engineering Report, Final.

Brown and Caldwell, 2002. National Frozen Foods Inc., Moses Lake Facility, Revised Wastewater Engineering Report Amendment and Irrigation Management Plan

Brown and Caldwell, 2003. National Frozen Foods, Moses Lake Facility, Updated Wastewater Engineering Report Amendment, and Irrigation Management Plan.

Brown and Caldwell, 2004. National Frozen Foods, Moses Lake Facility, Wastewater Enginering Report, Amendment and Irrigation and Crop Management Plan. May.

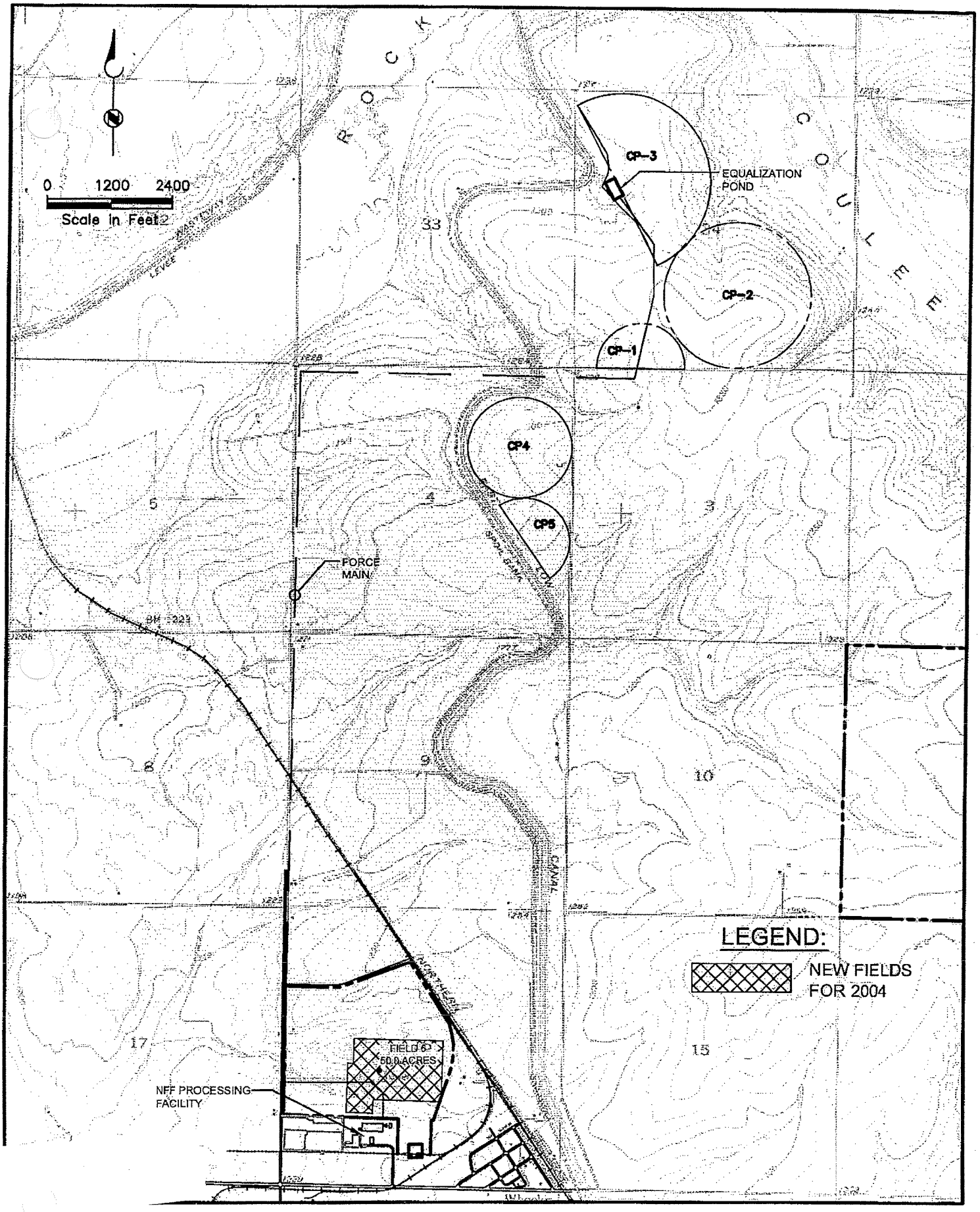

FIGURE 1: FORCE MAIN ROUTE AND IRRIGATION FIELDS. NATIONAL FROZEN FOODS MOSES LAKE, WASHINGTON